

ABSTRACT

A portable pump includes a rotating elliptical plate mounted on a rotating shaft, an elliptical plate follower with rollers or bearings positioned on the top and bottom surfaces of the rotating elliptical plate at a fixed distance from the axis of the supporting rotating shaft, rollers or bearings on the plate follower mated to roller or bearing races to restrict movement of the elliptical plate follower to directions parallel to the axis of the rotating shaft, a well pump tube with a bottom check valve affixed to the elliptical plate follower so that horizontal rotation of elliptical plate causes alternate vertical filling and draining of the pump tube so as to pump water or other fluids from a well. Alternate embodiments of the invention replace the well pump tube and check valve with a driven piston, confining cylinder, and check valve to allow creation of a partial vacuum, compression of a fluid, or pumping of any flowable material.